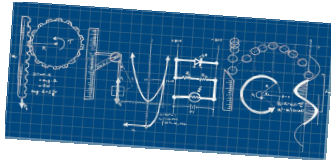


Welcome to PHYSICS!!!

SECA Physics
Monday 16 June 2014



H. Leslie Grebe
Room C-244



Opening Question:

A friend says the moon's phases are caused by the earth's shadow.

What's one thing you could tell them to convince them the phases are not?

Sep 7-7:04 AM

MACRO=TINY TELE=FAR SCOPE=LOOK

Reflection is when...

...light bounces off of a surface

Our eyes are light detectors.
What gives off light?

EVERY
THING ELSE
REFLECTS

CANDLES
SUN
OVERHEAD LIGHTS
LAMPS

Brainstorm: What do you (think you) know about
REFLECTION and MIRRORS?

MIRRORS REFLECT PRETTY EXACTLY

MAKE-UP MIRRORS MAGNIFY
↳ FLIP IT SAME SIZE ???

WATER, FLIP ARROWS ? REFLECT?

MIRROR IMAGE REVERSED

SATELLITE REFLECT SIGNALS/ENERGY

SOLAR OVEN — SUNLIGHT REFLECTS
TO HEAT

CURVEY → LOOK WEIRD FAT, TALL, SKINNY

Nov 16-7:37 AM

Let's measure some reflection for a flat mirror

- Pin #1 & 2
- Crouch down and look to put in #3
- Use protractor
- Measure distance to nearest tenth cm

What did you get?

What if we had a 1000 people do this lab?

Angle in:	Angle out:	Dist a:	Dist b:
40°	40°	4.1 cm	4.1 cm
27°	27°	2.8 cm	3.0 cm
39°	39°	3.5 cm	3.5 cm

Apr 23-7:31 AM

The law of reflection:



ANGLE IN = ANGLE OUT

What about the distances? (for a flat mirror)



DISTANCE FROM OBJECT TO MIRROR
= DISTANCE TO IMAGE FROM MIRROR
WHERE IT APPEARS

Apr 24-7:58 AM

Our 3 Questions

- * Most periods except test/project times
- * 3 Questions on the topics of the class
- * Main source of classwork points
- * I am happy to give full credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) REFLECTION is when light bounces off a surface.

2) Law of Reflection says: Angle in = ANGLE OUT

3) True or False:

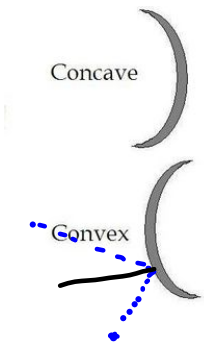
The distance the pin appears behind the mirror should be the same as the distance from the real pin to the mirror.

Jun 16-11:32 AM

Welcome back...

H. Leslie Grebe

Opening Question:



On a curved mirror, how could you figure out
"Angle in = angle out" ??? \perp TO MIRROR

Sep 7-7:04 AM

Reflections can make reflections???

Try it out...

What toy is based on this???

Counting the real object, how many
do you see at each setting?

KALEIDOSCOPE

360
WHOLE
CIRCLE

Angle

#Images

180	2
90	4
60	6
45	8
36	10
30	12
20	18

Nov 16-7:37 AM

Let's check out some curved mirrors...

Observe:

Orientation: Upside-down, right-side up, reversed?

Magnification: Larger, smaller, same size?

	REVERSED		
	Curved in	Flat	Curved out
Orientation:	CLOSE: RIGHT FAR: UPSIDE DOWN	RIGHT SIDE UP	RIGHT SIDE UP
Size:	BIGGER	SAME SIZE	SMALLER

Apr 23-7:31 AM

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Sep 9-7:32 AM

1) When the mirrors are at 90 degrees, how many of the object should you see?

90°

4

2) Which kind of mirror always makes images that look smaller / farther away than the object actually is?

A. curved in (concave)

B. flat

C. curved out (convex)

CON-
VEX (CAVE)

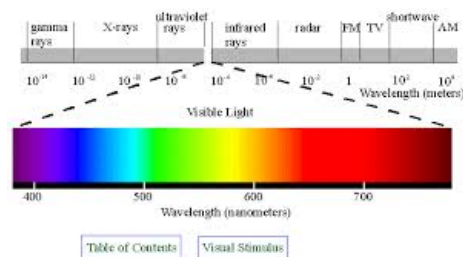
3) **True or False:**

Images in "curved in" mirrors are always upside down.

Jun 16-11:35 AM

Welcome back...

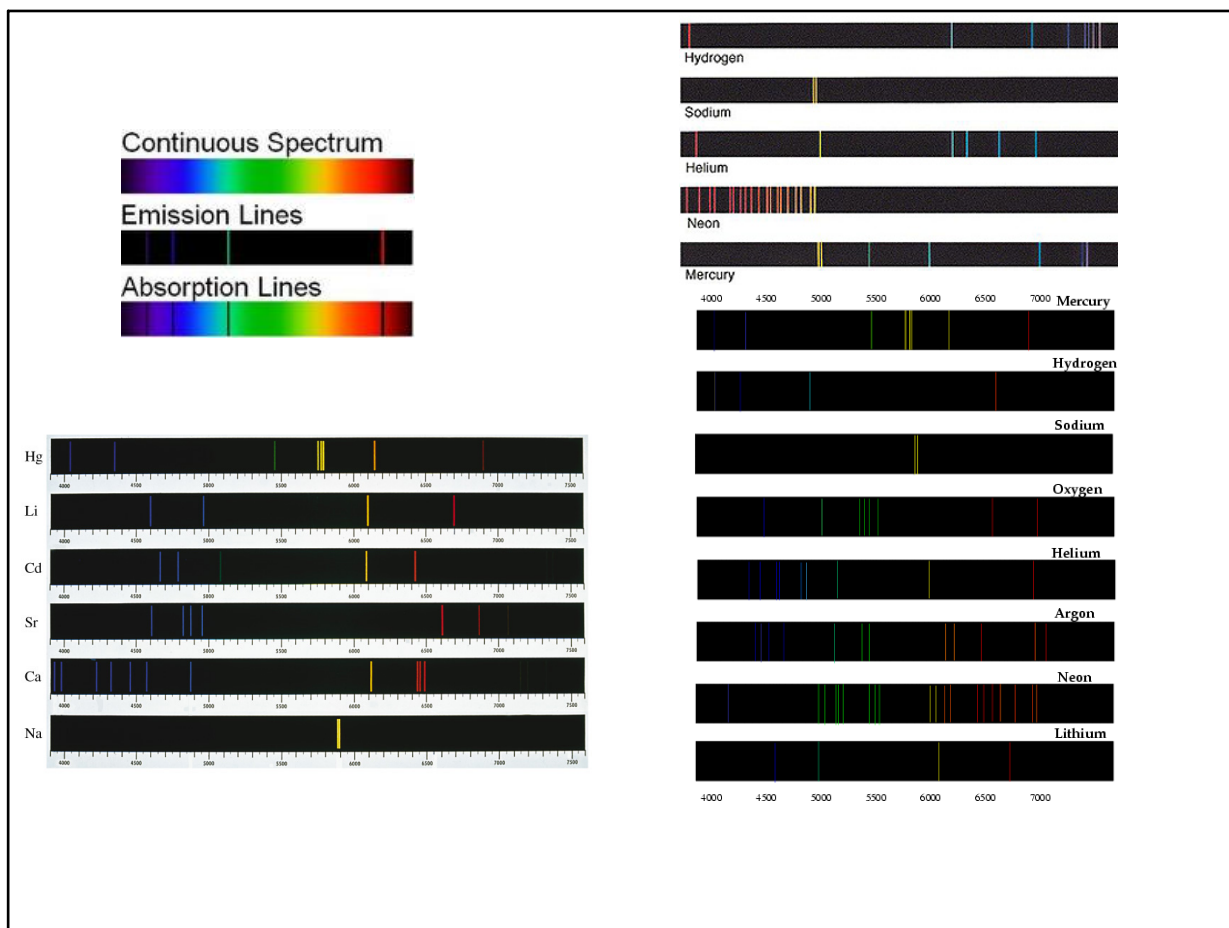
H. Leslie Grebe



Opening Question:

What other kinds of light are there?

Sep 7-7:04 AM



May 20-6:52 AM

Invisible Worlds - Piano key board?

EM waves?

Light is caused by things like electrons moving. This creates **ELECTROMAGNETIC WAVES**.

EM waves is just another name for all kinds of **LIGHT**.

Computer Lab: EM Web Quest

- Work with a partner (or alone)
- Points for the worksheet

Mar 11-7:27 AM

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Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) What is one light source whose spectrum had bright and dark spots?

CEILING
OVERHEAD

2) How was the laser pointer different from the rest?

ONLY RED

3) What do we call the tube that breaks the light into its different colors?

SPECTROSCOPE

Jun 13-11:38 AM